



NTSB *ACADEMY*

2006 Course Catalog

ntsb.gov/academy



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Course Listings

AVIATION

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Aircraft Accident Investigation (AS101)
Accident Investigation Orientation for Aviation
Professionals (AS301)
Survival Factors in Aviation Accidents (AS302)

HIGHWAY

(p. 14)

Motorcoach, Bus & 15-Passenger Vans (HS101)

INTERMODAL

(p. 15)

Cognitive Interviewing (IM401)
Investigating Human Fatigue Factors (IM303)
Technical Photography (IM304)
Advanced Accident Site Photography (IM306)
Photodocumentation of Traumatic Injuries (IM305)
Digital Image Processing (IM307)
Photodocumentation Series (IM300)

PUBLIC AFFAIRS

(p. 28)

Media Training for NTSB Investigators (PA101)
Managing Communications During an Aircraft Disaster
(PA302)

RAIL

(p. 30)

Accident Investigation Orientation for Rail
Professionals (RPH101)

TRANSPORTATION

DISASTER

RESPONSE

(p. 32)

Family Assistance (TDA301)
Mass Fatality Incidents for Medicolegal Professionals
(TDA403)
Airport Preparedness Program (TDA404)

PROFESSIONAL

DEVELOPMENT

(p. 36)

Conducting Effective Technical Presentations (ACD101)
Accident/Incident Report Writing (ACD103)

Confirm dates, times and programs -- and receive electronic updates about new courses, forums and symposia at [nts.gov/academy](https://www.nts.gov/academy)

2006 Schedule of Courses

February 7-9	Transportation Disaster Response – Family Assistance (p. 32)
Spring (Date TBD)	Accident Investigation Orientation for Rail Professionals (p. 30)
April 5-6	Managing Communications During An Aircraft Disaster (p. 29)
April 7	Transportation Disaster Response – Airport Preparedness Program (p. 34)
April 20-21	Accident Investigation Orientation for Aviation Professionals (p. 11)
April 24-25	Cognitive Interviewing for Accident Investigators (p. 15)
April 26-27	Investigating Human Fatigue Factors (p. 16)
May 15-19	Transportation Disaster Response – Mass Fatality Incidents for Medicolegal Professionals (p. 33)
May 15	Technical Photography (p. 18)
May 16	Advanced Accident Site Photography (p. 19)
May 17	Photodocumentation of Traumatic Injuries (p. 21)
May 18	Digital Image Processing (p. 23)
May 15-18	Photodocumentation Series (p. 24)
June 8-9	Motorcoach, Bus and 15 Passenger Vans: Current Issues and Case Studies (p. 14)
June 19-23	Survival Factors in Aviation Accidents (p. 12)

Confirm dates, times and programs -- and receive electronic updates about new courses, forums and symposia at ntsb.gov/academy

2006 Schedule of Courses continued

July 11-13	Transportation Disaster Response – Family Assistance (p. 32)
July 24-25	Accident/Incident Report Writing (p. 37)
July 26-27	Conducting Effective Technical Presentations (p. 36)
July 28	Media Training for Accident Investigators (p. 28)
Fall (Date TBD)	Accident Investigation Orientation for Rail Professionals (p. 30)
September 18-29	Aircraft Accident Investigation (p. 10)
October 16-17	Cognitive Interviewing for Accident Investigators (p. 15)
October 18-19	Investigating Human Fatigue Factors (p. 16)
October 23	Technical Photography (p. 18)
October 24	Advanced Accident Site Photography (p. 19)
October 25	Photodocumentation of Traumatic Injuries (p. 21)
October 26	Digital Image Processing (p. 23)
October 23-26	Photodocumentation Series (p. 24)
October 26-27	Accident Investigation Orientation for Aviation Professionals (p. 11)
November 14-16	Transportation Disaster Response – Family Assistance (p. 32)

Confirm dates, times and programs -- and receive electronic updates about new courses, forums and symposia at ntsb.gov/academy

2006 Calendar Grid

Course	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
AVIATION												
Aircraft Accident Investigation (p. 10)									18-29			
Accident Investigation Orientation (p. 11)				20-21						26-27		
Survival Factors in Aviation Accidents (p. 12)						19-23						
HIGHWAY												
Motorcoach, Bus & 15-Passenger Vans (p. 14)												
Dates To Be Determined (check ntsb.gov/academy)												
INTERMODAL												
Cognitive Interviewing (p. 15)				24-25						16-17		
Investigating Human Fatigue Factors (p. 16)				26-27						18-19		
Technical Photography (p. 18)					15					23		
Advanced Accident Site Photography (p. 19)					16					24		
Photodocumentation of Traumatic Injuries (p. 21)					17					25		
Digital Image Processing (p. 23)					18					26		
Photodocumentation Series (p. 24)					15-18					23-26		
PUBLIC AFFAIRS												
Media Training for NTSB Investigators (p. 28)							28					
Managing Communications During an Aircraft Disaster (p. 29)				5-6								
RAIL												
Accident Investigation Orientation (p. 30)												
Dates To Be Determined (check ntsb.gov/academy)												
TRANSPORTATION DISASTER RESPONSE												
Family Assistance (p. 32)		7-9					11-13				14-16	
Mass Fatality Incidents for Medicolegal Professionals (p. 33)					15-19							
Airport Preparedness Program (p. 34)				7								
PROFESSIONAL DEVELOPMENT												
Conducting Effective Technical Presentations (p. 36)							26-27					
Accident/Incident Report Writing (p. 37)							24-25					

Confirm dates, times and programs -- and receive electronic updates about new courses, forums and symposia at ntsb.gov/academy

Message From the Director

As the NTSB Academy enters its third full year of operation, we are pleased to announce the availability of Continuing Education Units (CEUs).

In August 2005, the Academy became an Authorized Provider of the International Association for Continuing Education and Training (IACET) CEU. This accreditation enhances the Academy's value within the transportation community in two ways:

- Every participant who attends a designated Academy course will now be eligible to receive CEUs after successfully completing that course
- Those in the transportation and emergency response communities who must obtain a specified number of CEUs on an annual basis for continuing education will now benefit from this value added to the Academy's offerings


While we focus on training transportation and emergency response professionals from around the world (more than 1,000 participants from 35 countries in 2005) we continue to add new features and programs:

- Course applicants can now apply and pay online through ntsb.gov/academy
- Participants in certain aviation courses will be involved in exercises in our fully equipped mock-up of a BAE Jetstream 41, a recently acquired 29-seat regional aircraft procedural trainer
- Three new courses have been developed for 2006: Railroad Industry Training (RPH101), Accident/Incident Report Writing (ACD103) and a course dealing with safety issues involving Motorcoach, Buses and 15-Passenger Vans (HS101)

The Academy has also moved forward with its support of ongoing investigations through the Academy. This year laboratory resources were expanded with the acquisition of state-of-the-art equipment to perform destructive testing on materials used in various modes of transportation.

You are invited to participate in our mission and growth by joining the dynamic learning environment offered at the NTSB Academy in 2006.

Sincerely,



Julie N. Beal
Director, NTSB Academy

About the NTSB Academy



The NTSB Academy is the training facility for the National Transportation Safety Board, an independent federal agency that investigates all civil aviation accidents in the United States and selected accidents in other modes of transportation.

Mission

To provide comprehensive education and training to the men and women who improve safety by conducting independent transportation accident investigations; to foster an environment that encourages transportation safety initiatives and technical research; and to promote uniform programs that ensure compassion, understanding and assistance for those affected by transportation tragedies.

Location

Located on the Virginia Campus of The George Washington University in Ashburn, the Academy is ten miles from Washington Dulles Airport and 30 miles from Washington, D.C. A map showing the Academy's location within the Washington, D.C. area is available on page 43.

Courses

The Academy offers a variety of courses ranging in length from one day to two weeks, with wide applicability outside of the field of transportation accident investigation, such as [*Cognitive Interviewing for Accident Investigators*](#), [*Investigating Human Fatigue Factors*](#) and the [*Photodocumentation Series*](#). Most courses offered at the Academy are open to those outside the Safety Board. In fact, the majority of those attending Academy courses are from transportation and emergency response communities outside the NTSB.

Who May Attend

The Academy does not enroll participants, as would a traditional academic institution. Since courses have differing admissions criteria, prospective participants are admitted on a course-by-course basis.

While forums and symposia are open to the public, certain courses are limited to those who may be directly involved in an NTSB accident investigation or are members of the emergency response community. See the [*Who May Attend*](#) section of each course description for further details.

Practical Training

Recognizing the importance of using the training material in the real world environment, Academy courses emphasize examples, demonstrations and, when appropriate, hands-on training. Participants leave the course with useful information and skills that can be applied immediately.

Accreditation

Continuing Education Units (CEUs) are awarded to every participant who successfully completes a designated scheduled course at the Academy. The number of CEUs awarded is indicated in each course description. More details about CEUs and transcripts are available on page 39.

Brief History

The NTSB Academy was established in 2000 to improve the training and skills of its own employees, and make its safety expertise more widely available to the diverse transportation community. In August 2003, the Academy began full operations when it moved into its new training facility on the Ashburn, Virginia campus of The George Washington University.

As of 2005, Academy courses, forums and symposia have been attended by over 3,000 transportation safety and emergency response professionals from more than 50 countries.

More information

Frequently asked questions, a virtual tour of the Academy campus, and a listing of courses, forums and symposia (including those added after this catalog was printed) are available on our website: [ntsb.gov/academy](https://www.ntsb.gov/academy)

Campus

The Academy's state-of-the-art, 72,000-square-foot, two-level facility includes:

- Five classrooms equipped with advanced audio/video systems and Internet connectivity
- Two conference rooms
- Video conferencing facilities
- Student lounge
- Laboratory to house instructional wreckage, including the 93-foot reconstruction of the forward portion of the TWA flight 800 aircraft's fuselage, the largest reconstruction in the history of civil aviation

Some courses include a tutorial on the investigation and reconstruction of TWA flight 800.

A virtual tour of the campus is available at ntsb.gov/academy



An ideal environment in which to exchange ideas and make connections with other transportation safety and emergency response professionals.

Course Descriptions

AVIATION

Aircraft Accident Investigation

DESCRIPTION: This course provides participants with a comprehensive overview of the procedures and methods used and the skills required to investigate an aircraft accident. Examples from recent NTSB investigations will be used to demonstrate particular aspects of the investigative process.

ID CODE: AS101

DATE: September 18–29, 2006. No classes on Saturday or Sunday.

TUITION: \$2,400 for all applications with payment received no later than August 18. \$2,500 for all applications with payment received August 19 - September 7.

APPLICATION DEADLINE: Applications must be received no later than September 7.

CEUs: 6.5

OVERVIEW:

- Site documentation and management
- Operational and mechanical aspects of aircraft performance
- Turbine and reciprocating engines
- Fire and explosions
- Fracture recognition
- Weather
- Radar analysis
- NTSB “party process”
- Progress meetings
- Survival factors
- Human performance
- Survivor interviews and witness reports
- Working with local area responders
- Safety Recommendations
- Case studies include midair collisions, in-flight fires, in-flight breakups and weather-related accidents

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Discuss the entire process, from when the NTSB receives the initial notification that an accident has occurred through the issuance of the final report and determination of the accident's probable cause
- Define the five major aspects of site management at an accident scene
- Identify how safety recommendations - the primary accomplishments of an accident investigation - are developed and issued
- Distinguish the difference between structural failures that may have caused the accident and structural damage that occurred as a result of the accident
- Identify what questions to ask accident witnesses to elicit the most accurate information
- Confidently interact with the media at the accident site and during the on-going investigation

WHO MAY ATTEND:

- Investigators from the NTSB and other accident investigation authorities/commissions worldwide
- Potential participants in an NTSB investigation: Investigative and safety personnel employed by airframe, engine or component manufacturers, airlines, civilian and military agencies, and related labor unions
- Members of the academic community attending for research purposes (on a space-available basis)

Accident Investigation Orientation for Aviation Professionals

DESCRIPTION: This course, led by senior NTSB management and investigators, details how the Safety Board investigates major aircraft accidents and what it expects of participants in an investigation.

ID CODE: AS301

DATES: April 20–21, 2006 (Thursday – Friday)
October 26 – 27, 2006 (Thursday – Friday)

TUITION: \$270 for all applications with payment received no later than: March 22 for April 20 – 21 course; or September 27 for Oct. 26 – 27 course. \$300 for all applications with payment received: March 23 – April 11 for April 20–21 course; or September 28 – October 17 for Oct. 26 – 27 course.

APPLICATION DEADLINE: Applications for April 20 – 21 course must be received no later than April 11. Applications for Oct. 26 – 27 course must be received no later than Oct. 17.

CEUs: Not available for this course

OVERVIEW:

- NTSB overview and history
- Authority of the NTSB Office of Aviation Safety
- “Go-team” and the on-scene investigation
- The “party” process
- Post on-scene investigation
- Responsibilities to families of accident victims
- Role of the NTSB board member and the Office of Public Affairs
- International investigations
- Safety recommendations
- Tutorial: TWA flight 800 investigation and reconstruction

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Improve the overall preparedness of an airline response team
- Reduce confusion following an accident event by proactively managing the on-scene situation
- Explain the role of the air carrier as a part of the “party process” at a domestic and international investigation.
- Identify what the federal law requires of air carriers regarding family assistance

WHO MAY ATTEND:

- Investigators from the NTSB and other accident investigation authorities/commissions worldwide
- Potential participants in an NTSB investigation: Investigative and safety personnel employed by airframe, engine or component manufacturers, airlines, civilian and military agencies, and related labor unions
- Members of the academic community attending for research purposes (on a space-available basis)

Survival Factors in Aviation Accidents

DESCRIPTION: This intensive, hands-on, 5-day course covers a wide range of aircraft occupant survivability issues, including case studies highlighting key components of accident survivability, cabin safety and emergency equipment. The material will be presented in seminar and workshop format by staff from NTSB, NASA-Langley Research Center, and the FAA Civil Aerospace Medical Institute.

ID CODE: AS302

DATE: June 19 – 23, 2006 (Monday – Friday)

TUITION: \$805 for all applications with payment received no later than May 19.
\$895 for all applications with payment received May 20 – June 8.

APPLICATION DEADLINE: Applications must be received no later than June 8.

CEUs: 3.2

OVERVIEW:

- Introduction to crashworthiness
- Flight attendant emergency procedures and training
- Documentation of injuries and fatalities
- Documentation of emergency equipment such as evacuation slides, emergency exits and emergency lights
- Airport emergency response plans
- Aircraft Rescue and Firefighting (ARFF)
- Search and rescue equipment and procedures
- Discussion of advances in safety resources and investigative methods derived from accident case studies
- Workshop: Wreckage documentation exercise in BAE Jetstream 41
- Workshop: Lab exercise to document seats and restraint systems
- Workshop: Survival Factors interview techniques

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Discuss factors affecting occupant survivability
- Effectively represent an organization as a member of an NTSB Survival Factors Group
- Describe the importance of flight attendant emergency procedures training and airport emergency response plans
- Document survival factors data in an aviation accident or incident
- Conduct interviews of accident survivors in a sensitive and thorough manner
- Acquire updated information on NASA and FAA crashworthiness programs

EQUIPMENT: Participants must provide their own digital camera for use in several documentation exercises.

WHO MAY ATTEND:

- NTSB & FAA investigators
- Foreign aviation investigation agencies
- Airline safety and operations personnel
- Agencies operating public-use aircraft
- Aircraft & aviation equipment manufacturers
- Members of the academic community attending for research purposes (on a space-available basis)

HIGHWAY

Motorcoach, Bus and 15 Passenger Vans

DESCRIPTION: This course will examine the most current safety issues involving motorcoaches, buses, and 15-passenger vans. Topics will include an overview of the NTSB, accident investigation procedures, and the interaction of three dynamic elements within any accident sequence – operations, driver, and vehicle. Actual NTSB case studies will be used to illustrate principles discussed in class.

ID CODE: HS101

DATE: To be determined (see [nts.gov/academy](https://www.nts.gov/academy))

TUITION: To be determined (see [nts.gov/academy](https://www.nts.gov/academy))

CEUs: 1.3

OVERVIEW:

- Overview of NTSB accident investigation history and emerging trends
- Detailed examination of each of the three major components of an accident investigation involving a motorcoach, bus or 15-passenger van:
 - Operations
 - Driver
 - Vehicle
- Emerging vehicle technologies
 - Braking systems
 - Collision Warning System (CWS)
 - Human interface with technology
 - Data records
 - Vehicle-based CWS
 - CWS deployments
 - Adaptive Cruise Control
- Discussion of crashworthiness issues
 - Dynamic stability
 - Driver training
 - Vehicle design

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Discuss how the primary components of an investigation – Operations, Driver and Vehicle – dynamically interact within the accident sequence.
- Describe the crashworthiness issues that affect the survivability of an accident.

- Discuss the current and emerging technologies in motorcoach, bus and 15 passenger vehicles, including crashworthiness, dynamic stability and vehicle design.
- Brief others in their organization on the key components of NTSB accident investigations

WHO MAY ATTEND:

- Motorcoach, bus, and van fleet managers and mid- and upper-level management and safety personnel
- NTSB investigators
- Local, state and federal transportation officials
- Local, state and federal police and investigation agencies
- Agencies and organizations that monitor or regulate transportation safety
- Labor unions representing transportation workers
- Members of the academic community attending for research purposes (on a space-available basis)

INTERMODAL

Cognitive Interviewing for Accident Investigators

DESCRIPTION: This course provides participants with the knowledge and skills needed to conduct interviews of participants in, and witnesses to, transportation incidents or accidents. Emphasis will be on the cognitive interviewing technique to maximize the amount and quality of information obtained during investigative interviews.

ID CODE: IM401

DATES: April 24 – 25, 2006 (Monday – Tuesday)
October 16 – 17, 2006 (Monday – Tuesday)

TUITION: \$585 for all applications with payment received no later than; March 24 for April 24 – 25 course; or September 15 for October 16 – 17 course. \$650 for all applications with payment received: March 25 – April 13 for April 24 – 25 course; or September 16 – October 5 for October 16 – 17 course.

APPLICATION DEADLINE: Applications must be received no later than April 13 for April 24 – 25 course. Applications must be received no later than October 5 for October 16 – 17 course.

CEUs: 1.3

ADDITIONAL HUMAN FACTORS COURSE: Save on travel, time and expenses – attend two courses in one trip. *Human Fatigue for Accident Investigators* is

offered April 26 – 27 (Wednesday – Thursday) and October 18 – 19 (Wednesday – Thursday). See course description below.

OVERVIEW:

- Theories of memory and recall
- Influences on eyewitness memory
- Logistical aspects of interviewing in transportation accident investigations
- Interviewer techniques to enhance interviewee recall
- Using interview information in accident investigations
- NTSB accident investigation case studies

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Use the Cognitive Interview (CI) method to obtain more accurate and complete information from eyewitnesses and critical personnel in accident investigations
- Explain how the social dynamics in an interview can affect its outcome
- Identify various errors of perception and memory
- Employ various techniques to enhance a witness' recall of an event
- Brief colleagues about the interview process and its impact on the outcome of an investigation

WHO MAY ATTEND:

- Those who may be involved in transportation accident investigations
- Those who may be required to conduct interviews as part of any type of investigation
- Those with an interest in the methodology of obtaining and applying critical data in a transportation accident investigation
- Members of the academic community attending for research purposes (on a space-available basis)

Investigating Human Fatigue Factors

DESCRIPTION: This course will provide participants with information and guidance to evaluate the role human fatigue plays in accident causation. It will cover fatigue-related issues including sleep length, sleep disorders, circadian rhythms, work schedules, and the effects of fatigue on performance and alertness. The course will also examine the types of information that should be collected during an investigation. Case studies and hands-on exercises will demonstrate the concepts discussed in the classroom.

ID CODE: IM303

DATES: April 26 – 27, 2006 (Wednesday – Thursday)
October 18 – 19, 2006 (Wednesday – Thursday)

TUITION: \$675 for all applications with payment received no later than: March 28 for April 26 – 27 course; or September 19 for Oct. 18 – 19 course. \$750 for all applications with payment received: March 29 – April 17 for April 26 – 27 course; or September 20 – October 9 for Oct. 18 – 19 course.

APPLICATION DEADLINE: Applications for April 26 – 27 course must be received no later than April 17. Applications for Oct. 18 – 19 course must be received no later than Oct. 9.

CEUs: 1.3

ADDITIONAL HUMAN FACTORS COURSE: Save on travel, time and expenses – attend two courses in one trip. *Cognitive Interviewing* is offered April 24– 25 (Monday – Tuesday) and October 16 – 17 (Monday – Tuesday). See course description on page 15 for details.

OVERVIEW:

- Physiological basis of human fatigue - cumulative sleep debt, effects of age, alcohol, sleep disorders and circadian rhythms
- Performance and alertness - how sleep loss, sleep disorders, circadian rhythms, medications and environment affect human performance
- Scheduling factors - how shift work, time zone changes, minimum rest opportunities, duty length and other factors interact and contribute to fatigue
- Assessing core factors - how to assess the significance of each of the four core fatigue factors (sleep loss, continuous hours of wakefulness, circadian rhythms, and sleep disorders) in an accident investigation
- Collecting and analyzing fatigue factors - how to gather, analyze, portray, and interpret fatigue information, including relevant questions to ask operators, organization representatives, family members, and others
- Practical application - course exercises will include interviewing for fatigue, and interpretation and analysis of fatigue related performance factors in an accident investigation

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Determine if fatigue played a role in an accident, and if so, whether it was contributory or causal
- Employ interview techniques and relevant questions to determine how fatigue may have contributed to an accident sequence
- Use the knowledge and skills acquired in the course to build a foundation for the inclusion or exclusion of fatigue as a factor in an accident investigation
- Implement internal strategies to reduce likelihood of fatigue-related accidents

WHO MAY ATTEND:

- NTSB investigators
- Local, state and federal transportation officials
- Local, state and federal police and investigation agencies
- Agencies and organizations that monitor or regulate transportation safety
- Commercial transportation industry officials – airline, motor coach, school bus, truck, railroad, pipeline and marine vessel operators
- Labor unions representing transportation workers
- Organizations, agencies and individuals that have an interest in how fatigue impacts transportation safety
- Members of the academic community attending for research purposes (on a space-available basis)

Technical Photography

DESCRIPTION: The principles of digital imaging will be explained and demonstrated. Participants will create images and apply techniques discussed in class.

ID CODE: IM304

DATES: May 15, 2006 (Monday)
October 23, 2006 (Monday)

TUITION: \$270 for all applications with payment received no later than: April 14 for May 15 course; or September 22 for Oct. 23 course. \$300 for all applications with payment received: April 15 – May 4 for May 15 course; or September 23 – October 12 for Oct. 23 course.

PHOTODOCUMENTATION SERIES Save on travel, time and expenses – attend the entire Photodocumentation Series, May 15 – 18 (Monday – Thursday) and October 23 – 26 (Monday – Thursday) for a discounted tuition. See course description on page 24 for details.

APPLICATION DEADLINE: Applications must be received no later than May 4 for May 15 course. Applications must be received no later than October 12 for October 23 course.

CEUs: 0.7. This course is also certified by the Virginia Department of Criminal Justice Services for 8 hours (Career Development/Elective) of Partial In-Service Credit (PIC).

OVERVIEW:

- Digital photography – how a digital image is formed, processed and stored; digital vs. analog imaging; adjusting resolution & file sizes for particular purposes

- Camera usage and care – holding, focusing, light metering, batteries, moisture and cleaning
- Elements of exposure – shutter speeds, lens apertures, depth-of-field and exposure vs. noise
- Lighting – sources and techniques
- Close-up and macro-photography – use of flash, filtration and polarization
- Troubleshooting – Resolving frequently encountered difficulties
- Photographer safety and camera care
- Digital imaging media, techniques and cautions

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Maximize the benefits of digital imaging
- Improve images by understanding the elements of exposure
- Get the most out of the camera's macro-capabilities
- Perform the most complete artifact documentation under any circumstances
- Preserve photographic equipment by learning to care for it under all conditions

EQUIPMENT: Participants must provide their own digital camera and laptop computer and should be familiar with the operation of both prior to attending the course. In addition, participants are encouraged to bring to class accessories that they may use on the job, such as scales, mirrors, memory and tripods.

WHO MAY ATTEND:

- NTSB investigators
- Federal, state & local investigators, including those outside the field of transportation, who may have a need to photographically document the site of an accident/incident or understand the process
- Potential participants in an NTSB investigation
- Others who would like to build or enhance photographic documentation

Advanced Accident Site Photography

DESCRIPTION: Participants will learn how to capture the most important and useful images to document any accident site. Through the use of methods described in this course participants will expose their own images in various photographic disciplines and then share in critique sessions offering constructive observations for improvement. Course format will be 4 - 5 hours of interactive instruction and demonstration, and 2 - 3 hours of practical exercises.

PREREQUISITE: Completion of Technical Photography (IM304) or a strong working knowledge of photographic principles.

ID CODE: IM306

DATES: May 16, 2006 (Tuesday)
October 24, 2006 (Tuesday)

TUITION: \$270 for all applications with payment received no later than: April 17, 2006 for May 16 course; or September 25 for Oct. 24 course. \$300 for all applications with payment received: April 18 – May 5 for May 16 course; or September 26 – October 13 for Oct. 24 course.

PHOTODOCUMENTATION SERIES: Save on travel, time and expense—attend the entire photodocumentation series May 15 – 18 (Monday – Thursday) and October 23 – 26 (Monday – Thursday) for discounted tuition. See page 24 for details.

APPLICATION DEADLINE: Applications must be received no later than May 5 for May 16 course. Applications must be received no later than October 13 for October 24 course.

CEUs: 0.7. This course is also certified by the Virginia Department of Criminal Justice Services for up to 11 hours (Career Development/Elective) of Partial In-Service Credit (PIC).

OVERVIEW:

- Project environment – preparing for assignments under any conditions
- Documenting the scene – protocols for documentation and storage of images of any site
- Size, color and positional references – GPS capabilities and animation
- Storytelling – capturing images to maximize informational content; point of view, angle of view; use of alternative lighting and image capture
- Quantitative scene data – virtual reality, photomontage, perspective grids and vanishing points to photogrammetry and reverse photogrammetry
- Authenticity – ensuring image authenticity through use of specific procedures
- Photo Reality – taking advantage of contrast, perspective, proper lens focal length, 2D vs. 3D dimensionality and color reproduction
- Exercise: Documentation of simulated aircraft accident site

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Record accurate and useful investigative images and minimize photographic distortions by employing techniques demonstrated in the course
- Obtain images of an accident site so that the scene may be recreated as necessary

- Use the elements of contrast, perspective, dimensionality and color reproduction to optimize photo-reality
- Capture images using specified protocols to ensure authenticity, accuracy and admissibility
- Obtain images of an accident site so that the scene may be recreated as necessary
- Use the elements of contrast, perspective, dimensionality and color reproduction to optimize photo-reality
- Capture images using specified protocols to ensure authenticity, accuracy and admissibility

EQUIPMENT: Participants must provide their own digital camera and laptop computer. In addition, participants are encouraged to bring to class accessories that they may use on the job, such as scales, mirrors, memory and tripods.

WHO MAY ATTEND:

- NTSB investigators
- Federal, state & local investigators, including those outside the field of transportation, who would like to build or enhance technical photographic skills
- Potential participants in an NTSB investigation
- Others who would like to build or enhance technical photographic skills

Photodocumentation of Traumatic Injuries

DESCRIPTION: Participants will learn the techniques and protocols for the documentation of crime and accident victims and the scenes at which they are found, including the photodocumentation of injuries, bruises, tattoos, scars, teeth, fingerprints, body parts and miscellaneous artifacts. Close-up and macro-photography techniques will be demonstrated as well as critical aspects of documenting the human within the scene by using appropriate references.

PREREQUISITE: Completion of Technical Photography (IM304) or a strong working knowledge of photographic principles.

ID CODE: IM305

DATES: May 17, 2006 (Wednesday)
October 25, 2006 (Wednesday)

TUITION: \$270 for all applications with payment received no later than: April 18 for May 17 course; or September 26 for Oct. 25 course. \$300 for all applications with payment received: April 19 – May 8 for May 17 course; or September 27 – October 16 for Oct. 25 course.

PHOTODOCUMENTATION SERIES: Save on travel, time and expense—attend the entire photodocumentation series May 15-18 (Monday – Thursday) and October 23 – 26 (Monday – Thursday) for discounted tuition. See page 24 for details.

APPLICATION DEADLINE: Applications must be received no later than May 8 for May 17 course. Applications must be received no later than October 16 for October 25 course.

CEUs: 0.7. This course is also certified by the Virginia Department of Criminal Justice Services for 8 hours (Career Development/Elective) of Partial In-Service Credit (PIC).

OVERVIEW:

- Protocols of scene and evidence documentation - development of useful documentation forms
- Documentation of crash, crime, and accident victims - data recording and sorting
- Personal safety during documentation
- Forensic light sources - image receptors for UV and IR lighting
- Techniques for documentation of fires and fire victims
- Aspects of forensic dentistry
- Blood evidence documentation and analysis
- Usefulness of forensic radiography
- Advances in digital forensic imaging - camera capture vs. scanning

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Increase the quality and value of photodocumentary accident site and injury information
- Reduce errors and omissions through the use of established techniques and protocols
- Employ optimal lighting techniques for a variety of situations
- Discuss key aspects of forensic dentistry and radiography relevant to the photographer
- Reduce exposure to personal injury at accident/crime site

EQUIPMENT: Participants must provide their own digital camera and laptop computer. In addition, participants are encouraged to bring to class accessories that they may use on the job, such as scales, mirrors, memory, and tripods.

WHO MAY ATTEND:

- NTSB investigators
- Federal, state & local investigators, including those outside the field of transportation, who may have a need to photographically document the site of an accident/incident or understand the process

- Potential participants in an NTSB investigation
- Others who would like to build or enhance technical photographic skills

Digital Image Processing

DESCRIPTION: Processing and storing of images for current and archival use in a variety of electronic formats. Discussion of generally accepted protocols for processing of images to enhance image clarity and information while retaining authenticity crucial for use as documentary evidence.

ID CODE: IM307

DATES: May 18, 2006 (Thursday)
October 26, 2006 (Thursday)

TUITION: \$270 for all applications with payment received no later than: April 19 for May 18 course; or September 27 for Oct. 26 course. \$300 for all applications with payment received: April 20 – May 9 for May 18 course; or September 28 – October 17 for Oct. 26 course.

PHOTODOCUMENTATION SERIES: Save on travel, time and expenses – attend the entire Photodocumentation Series, May 15-18 (Monday – Thursday) and October 23 – 26 (Monday – Thursday) for a discounted tuition. See page 24 for details.

APPLICATION DEADLINE: Applications must be received no later than May 9 for May 18 course. Applications must be received no later than October 17 for October 26 course.

CEUs: 0.7. This course is also certified by the Virginia Department of Criminal Justice Services for 8 hours (Career Development/Elective) of Partial In-Service Credit (PIC).

OVERVIEW:

- Workflow process – from image capture to archival storage
- Scanning – converting traditional prints into digital images
- File types – determining optimal file formats for various image types and usages
- Image size – Guidelines for best file sizes for a range of storage and electronic transmission considerations
- Compression – balancing the benefits and drawbacks of various modes of image compression
- Image Correction – using imaging programs to correct for deficiencies in overall image quality:

- Enhancing detail
 - Adjusting luminosity
 - Cropping out distracting/irrelevant elements
 - Correcting distorted color
 - Improving contrast
- Authenticity protocols – practices and procedures to ensure that the integrity and accuracy of the documentary digital image is not compromised at any point in the workflow process

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Discuss the elements that affect image quality when scanning various types of media into a digital format
- Select the best image file formats for a variety of situations
- Determine the appropriate image file sizes for:
 - E-mail
 - Display on computer monitors
 - Archival or documentary use
 - Print or publishing
- Compress images for data transfer in a variety of formats
- Employ the range of software tools available to enhance and correct documentary images
- Avoid mistakes that could compromise the authenticity of a documentary digital image

EQUIPMENT: Participants must provide their own laptop computer.

WHO MAY ATTEND:

- NTSB investigators
- Federal, state & local investigators, including those outside the field of transportation, who may have a need to photographically document the site of an accident/incident or understand the process
- Potential participants in an NTSB investigation
- Others who would like to build or enhance photographic documentation skills

Photodocumentation Series

DESCRIPTION: Four courses for a single discounted tuition – three days of photography and one day of digital image processing.

Day One – Technical Photography (IM304)

The principles of digital imaging will be explained and demonstrated.

Participants will create images to apply techniques discussed in class. Participants should be familiar with the operation of their digital camera prior to attending the course.

Day Two – Advanced Accident Site Photography (IM306)

Capture the most important and useful images to document any accident site. Through the use of methods described in this course, participants will expose their own images in various photographic disciplines and then share in critique sessions offering constructive observations for improvement. Course format will be 4 - 5 hours of interactive instruction and demonstration, and 2 - 3 hours of practical exercises.

Day Three – Photodocumentation of Traumatic Injuries (IM305)

Techniques and protocols for the documentation of crime and accident victims and the scenes at which they are found, including the photodocumentation of injuries, bruises, tattoos, scars, teeth, fingerprints, body parts and miscellaneous artifacts. Close-up and macro-photography techniques will be demonstrated as well as critical aspects of documenting the human within the scene by using appropriate references.

Day Four – Digital Image Processing (IM307)

Processing and storing of images for current and archival use in a variety of electronic formats. Discussion of generally accepted protocols for processing of images to enhance image clarity and information while retaining authenticity crucial for use as documentary evidence.

ID CODE: IM300

DATES: May 15 – 18, 2006 (Monday – Thursday)
October 23 – 26, 2006 (Monday – Thursday)

TUITION: \$855 for all applications with payment received no later than: April 14 for May 15 – 18 course; or September 22 for Oct. 23 – 26 course. \$950 for all applications with payment received: April 15 – May 4 for May 15 – 18 course; or September 23 – October 12 for Oct. 23 – 26 course. *Each of the four courses may be taken individually. See separate course descriptions for dates and tuitions.*

APPLICATION DEADLINE: Applications can be sent via fax or mail and must be received no later than May 4 for May 15 – 18 course or October 12 for October 23 – 26 course.

CEUs: 2.8. This course is also certified by the Virginia Department of Criminal Justice Services for up to 35 hours (Career Development/Elective) of Partial In-Service Credit (PIC).

OVERVIEW:**Day One – Technical Photography (IM304)**

- Protocols of scene and evidence documentation – development of useful documentation forms
- Digital photography – how a digital image is formed, processed and stored; digital vs. analog imaging; adjusting resolution & file sizes for particular purposes
- Camera usage and care – holding, focusing, light metering, batteries, moisture and cleaning
- Elements of exposure – shutter speeds, lens apertures, depth-of-field and exposure vs. noise
- Lighting – sources and techniques
- Close-up and macro-photography – use of flash, filtration and polarization
- Troubleshooting – Resolving difficulties by understanding the basics of digital hardware
- Photographer safety and camera care
- Digital imaging media, techniques and cautions

Day Two – Advanced Accident Site Photography (IM306)

- Project environment – preparing for assignments under any conditions
- Documenting the scene – protocols for documentation and storage of images of any site
- Size, color and positional references – GPS capabilities and animation
- Storytelling – capturing images to maximize informational content; point of view, angle of view; use of alternative lighting and image capture
- Quantitative scene data – virtual reality, photomontage, perspective grids and vanishing points to photogrammetry and reverse photogrammetry
- Authenticity – ensuring image authenticity through use of specific procedures
- Photo Reality – taking advantage of contrast, perspective, proper lens focal length, 2D vs. 3D dimensionality and color reproduction
- Exercise: Documentation of simulated aircraft accident site

Day Three – Photodocumentation of Traumatic Injuries (IM305)

- Protocols of scene and evidence documentation - development of useful documentation forms
- Documentation of crash, crime, and accident victims - data recording and sorting
- Personal safety during documentation
- Forensic light sources - image receptors for UV and IR lighting
- Techniques for documentation of fires and fire victims

- Aspects of forensic dentistry
- Blood evidence documentation and analysis
- Usefulness of forensic radiography
- Advances in digital forensic imaging - camera capture vs. scanning

Day Four – Digital Image Processing (IM307)

- Workflow process – from image capture to archival storage
- Scanning – converting traditional prints into digital images
- File types – determining optimal file formats for various image types and usages
- Image size – Guidelines for best file sizes for a range of storage and electronic transmission considerations
- Compression – balancing the benefits and drawbacks of various modes of image compression
- Image Correction – using imaging programs to correct for deficiencies in overall image quality:
 - Enhancing detail
 - Adjusting luminosity
 - Cropping out distracting/irrelevant elements
 - Correcting distorted color
 - Improving contrast
- Authenticity protocols – practices and procedures to ensure that the integrity and accuracy of the documentary digital image is not compromised at any point in the workflow process

EQUIPMENT: Participants must provide their own digital camera and laptop computer. In addition, participants are encouraged to bring to class accessories that they may use on the job, such as scales, mirrors, memory and tripods.

WHO MAY ATTEND:

- NTSB investigators
- Federal, state & local investigators, including those outside the field of transportation, who may have a need to photographically document the site of an accident/incident or understand the process
- Potential participants in an NTSB investigation
- Others who would like to build or enhance photographic documentation skills

PUBLIC AFFAIRS

Media Training for NTSB Investigators (NTSB staff only)

DESCRIPTION: Participants will learn techniques and guidelines for giving interviews to both print and broadcast media while in the field and with little time for preparation. This course is appropriate for experienced as well as new staff.

ID CODE: PA101

DATE: July 28, 2006 (Friday)

REGISTRATION DEADLINE: July 19. Online registration available - contact your administrative officer.

CEUs: 0.7

OVERVIEW:

- Releasable news – presenting factual information while avoiding analysis
- On-scene media relations:
 - Informing the media of launch details
 - Working with the Office of Public Affairs during an accident
 - Press briefings
 - News photography at the accident site
- Post-accident media relations
 - Explaining the process (preliminary, factual, and final reports)
 - Investigation updates
 - The opening of the docket
- Techniques – enhance your skills as an interviewee
- Examples from actual interviews – what went right and what could be improved
- Office of Public Affairs – guidelines for when they should be called upon

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Provide the most timely, accurate and relevant information to local and national media during the on-scene and post-accident phases of an accident investigation
- Deliver interviews more confidently in even the most challenging conditions

- Provide more succinct and comprehensive briefings to the media on investigation updates and the entire NTSB process
- More effectively use the resources provided by the Office of Public Affairs
- Avoid misstatements and analysis

WHO MAY ATTEND: NTSB employees who may be required to disseminate information to the media.

Managing Communications During an Aircraft Disaster

DESCRIPTION: The course will teach participants what to expect in the days immediately following an airport aviation disaster and how they can prepare for their role with the media.

Co-SPONSOR: Airports Council International - North America (ACI-NA)

ID CODE: PA302

DATE: April 5 – 6, 2006 (Wednesday – Thursday)

TUITION: To be determined. Please check ntsb.gov/academy

ADDITIONAL AIRPORTS COURSE: Save on travel, time and expenses – attend two courses in one trip. *Transportation Disaster Response — Airports* is offered April 7 (Friday). See course description on page 34 for details.

APPLICATION DEADLINE: To be determined. Please check ntsb.gov/academy

CEUs: 1.3

OVERVIEW:

- What can be expected in the days after an aviation disaster from the NTSB, FAA, other federal agencies, airline, airport, media and local community
- Strategies for airline and airport staff to proactively manage the communication process throughout the on-scene phase of the investigation
- How the NTSB public affairs officers coordinate press conferences and release of accident information and what information the spokespersons from the airport and airline will be responsible to provide to the media

- Making provisions for and communicating with family members of those involved in the accident
- Questions and requests likely encountered from the airlines, airport staff, family members, disaster relief agencies, local officials and others

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Be better prepared to respond to a major aviation disaster involving a flight departing from or destined for participant's airport
- Identify the appropriate Public Affairs roles for the various organizations involved in an accident investigation
- Demonstrate greater confidence in fielding on-scene questions about the many aspects of the investigation and its participants, including what types of specific information may be requested
- Be more productive in the chaotic aftermath following an aviation disaster by identifying which tasks are most important and why
- Perform job responsibilities more professionally and with greater confidence employing the knowledge and tools to manage the airport communications aspect of a major aviation disaster

WHO MAY ATTEND: Airport and airline public affairs and operations professionals who, in the event of an aviation disaster, will need to provide a steady flow of accurate information to media outlets and/or other airport, federal or local authorities.

RAIL

Accident Investigation Orientation for Rail Professionals

DESCRIPTION: Led by senior NTSB management and investigators, this course details how the Safety Board investigates railroad accidents and what it expects of participants in an investigation.

ID CODE: RPH101

DATES: To be determined. Please check [ntsb.gov/academy](https://www.ntsb.gov/academy) for dates.

TUITION: To be determined. Please check [ntsb.gov/academy](https://www.ntsb.gov/academy) for tuition.

CEUs: Not available for this course.

OVERVIEW:

- NTSB overview and history
- Authority and limitations of the NTSB Office of Railroad, Pipeline and Hazardous Materials
- NTSB go-team and the on-scene investigation
- The “party” process
- Post on-scene investigation
- Services and support provided to families of accident victims
- Role of the NTSB Board Member and the Office of Public Affairs
- Safety recommendations

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Work in a close and coordinated manner with the NTSB investigators on-scene
- Discuss how the NTSB investigators work on-scene at an accident and the role of a “party” member
- Describe the NTSB accident investigation from initial notification to final board meeting and recommendations
- Explain what types of services and support are available to family members of victims of railroad accidents
- Coordinate with the NTSB Office of Public Affairs the release of relevant and appropriate information to the public

WHO MAY ATTEND:

- Investigators from the NTSB and other accident investigation authorities/commissions worldwide
- Potential participants in an NTSB investigation: investigative, safety and management personnel employed by railroad, track, engine or component manufacturers; civilian and military agencies; and related labor unions
- Members of the academic community attending for research purposes (on a space-available basis)

TRANSPORTATION DISASTER RESPONSE

Family Assistance

DESCRIPTION: This course takes participants through the entire family assistance process following a major transportation disaster. NTSB investigators, transportation disaster assistance specialists, clinicians and other professionals will present a variety of disaster response and family assistance topics.

ID CODE: TDA301

DATES: February 7 – 9, 2006 (Tuesday – Thursday)
July 11 – 13, 2006 (Tuesday – Thursday)
November 14 – 16, 2006 (Tuesday – Thursday)

TUITION: \$535 for all applications with payment received no later than: January 6 for Feb. 7 – 9 course; June 9 for July 11 – 13 course; or October 13 for Nov. 14 – 16 course. \$595 for all applications with payment received: January 7 – 27 for Feb 7 – 9 course; June 10 – 30 for July 11 – 13 course; or Oct. 14 – Nov. 3 course for Nov 14 – 16 course.

APPLICATION DEADLINE: Applications for Feb. 7 – 9 course must be received no later than January 27. Applications for July 11 – 13 course must be received no later than June 30. Applications for Nov. 14 – 16 course must be received no later than Nov. 3.

CEUs: 2.0

OVERVIEW:

- Legal aspects of family assistance - specifics of legal protections afforded to family members
- Conducting effective family briefings - communicating with grieving and traumatized families
- Effective on-scene response - a start to finish look at family assistance operations
- Successful forensic operations - communicating with families about the forensic response
- Practical resources for family representatives - developing support skills, and self care

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Improve on-scene coordination and communication
- Manage limited resources more effectively
- Define the practical skills for working with grieving family members
- Apply the skills from the class to conduct an effective family briefing
- Brief others in their organization about the disaster response process and the role of the NTSB

WHO MAY ATTEND:

- Commercial transportation industry officials, particularly those that are in a position to set or influence policy, or have a family assistance role during transportation disasters
- Representatives of federal agencies, particularly those that have a role in transportation disaster response
- Representatives of non-governmental and/or private agencies that have a legitimate and recognized transportation disaster response role
- Members of the academic community attending for research purposes (on a space-available basis)

Mass Fatality Incidents for Medicolegal Professionals

DESCRIPTION: This course examines the principles of victim recovery and identification and the associated family assistance procedures for successfully managing mass fatality incidents involving transportation related accidents. In addition to classroom presentations, participants will conduct a simulated search and recovery exercise and conduct the initial operation of a disaster morgue. Course faculty includes NTSB responders, forensic scientists, and federal agency representatives with a variety of experience in mass fatality response.

ID CODE: TDA403

DATE: May 15 – 19, 2006 (Monday – Friday)

TUITION: \$810 for all applications with payment received no later than April 14.
\$900 for all applications with payment received April 15 – May 4.

APPLICATION DEADLINE: Applications must be received no later than May 4.

CEUs: 3.0

OVERVIEW:

- History and evolution of mass fatality incident response
- Roles of federal agencies involved in transportation mass fatality response events
- Victim recovery and working with the FBI Evidence Response Team

- Theory and practice of victim identification, including the use of DNA technology
- Family assistance center operations and family briefings
- Management of personal effects
- Collection of antemortem data (medical, dental, DNA)
- Changes in procedures in criminal events
- Survival factors issues for the forensic responder
- Post-response issues: site visits, memorials, family interactions
- Media relations in mass fatality events
- Practical exercises in recovery and morgue operations

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Explain the processes and methods employed in a mass fatality incident response
- Clarify the roles of the state and federal government agencies
- Define federal laws impacting the management of transportation disasters
- Discuss the role of forensic science in a mass disaster scene
- Recognize the role of the NTSB, the FBI and other federal agencies during a mass disaster
- Identify the challenges of integrating ante mortem and post mortem data during a mass fatality incident
- Define what role DNA plays in the identification process and the role of pathology as it relates to the investigation
- Discuss the role of survival factors investigation by the NTSB
- Explain the issues involved with family assistance including family briefings, site visits, memorials and personal effects

WHO MAY ATTEND:

- Medical examiners and coroners
- Local, state, and federal medicolegal investigators
- Forensic scientists: anthropologists, odontologists, pathologists, DNA analysts
- DMORT team members
- Military mortuary team members and related personnel
- State emergency management agency employees
- Municipal, county, state, and federal law enforcement agency personnel
- Members of the academic community attending for research purposes (on a space-available basis)

Airport Preparedness Program

DESCRIPTION: This course covers the numerous challenges faced by airports and airlines in the first 12 hours following a major passenger aircraft accident,

and equips participants with strategies and materials to plan and coordinate an effective response to assist the relatives and friends of accident victims. NTSB Transportation Disaster Assistance staff will lead the course and assist participants with planning issues unique to their airport. With an emphasis on Q&A, participants will have ample opportunities to interact with staff.

ID CODE: TDA404

DATE: April 7, 2006 (Friday)

TUITION: \$315 for all applications with payment received no later than March 9. \$350 for all applications with payment received March 10 – 29.

ADDITIONAL AIRPORTS COURSE: Save on travel, time and expenses – attend two courses in one trip. *Managing Communications During an Aircraft Disaster* is offered April 5 – 6. See course description on page 29 for details.

APPLICATION DEADLINE: Applications must be received no later than March 29.

CEUs: 0.7

OVERVIEW:

- Understanding the unique response requirements for the two primary types of aviation disasters and how victims are affected by them
- Issues unique to accidents and incidents involving airlines with limited airport staff (or contracted airport staff)
- Determining who should be considered a “family member”
- Assisting with the immediate needs of family members in the first 12 hours after an accident
- Planning a Friends and Family Gathering Center
- Protecting family members’ privacy
- Transitioning family members from the Friends and Family Gathering Center to the airline-established Family Assistance Center
- Understanding the FBI’s role in criminal transportation accident investigations and family support services
- Employing strategies for effective communication with local and state responders, NTSB, FAA, FBI, airlines and airport tenants

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Provide for relatives’ and friends’ full range of needs in an emotionally charged environment
- Avoid mistakes by reviewing lessons learned from previous accidents

- Employ forms and checklists provided to ensure that all major aspects of an Airport Friends and Relatives Assistance Plan are completed in order of priority
- Explain the NTSB and FBI roles during an aircraft accident
- Extend in-house training to staff through the use of course materials

WHO MAY ATTEND:

- Airport management and staff
- Airport-based airline management and staff
- Airport police departments
- Airport emergency planners and rescue and firefighting personnel
- State or local emergency planners
- Members of the academic community attending for research purposes (on a space available basis)

PROFESSIONAL DEVELOPMENT

Conducting Effective Technical Presentations (NTSB staff only)

DESCRIPTION: This course will equip you with the practical tools and innovative methods to more confidently deliver effective presentations in technical subject areas to large audiences.

ID CODE: ACD101

DATE: July 26 – 27, 2006 (Wednesday – Thursday)

REGISTRATION DEADLINE: July 17. Online registration available - contact your administrative officer.

CEUs: 1.3

OVERVIEW:

[Day One: Effective Technical Presentations](#)

Providing NTSB staff with skills and tools in the public presentation of technical information concerning complex systems.

- **DEVELOPMENT:** The identification and utilization of an effective system to organize ideas and information, define and organize the important points to be communicated, and identify the components of effective presentations from the introduction to the conclusion.
- **DELIVERY:** Identify, explore, and practice effective presentation skills that keep the presentation focused upon the important points, most

effectively communicate the information to diverse audiences with accuracy, brevity, and clarity. This includes the effective use of PowerPoint and related presentation vehicles.

Day Two: Communication Strategies for Diverse Audiences

Building on the foundation laid on the first day, participants will be provided with the tools and techniques to deliver professional presentations to diverse audiences in the training/adult education environment.

- **PREPARATION:** Organizing and formatting the content based on the goals that the presenter aims to achieve.
- **DEVELOPMENT:** Constructing materials, electronic and written, to best support the ideals of instructor-led and participant-centered instruction.
- **DELIVERY:** Compelling openings, communication of key ideas, and effective closings. Techniques to increase participant enthusiasm and responsibility for learning.

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Deliver more effective technical presentations through use of techniques and strategies proven to enhance learning
- Manage the classroom environment and maintain control of the topic during Q&A
- Construct better presentations with the latest technology
- Avoid common mistakes frequently made in technical presentations
- Speak with greater confidence to large and diverse audiences

WHO MAY ATTEND: NTSB staff who give public presentations and wish to improve their delivery, communication and interaction skills.

Accident/Incident Report Writing (NTSB Staff Only)

DESCRIPTION: Designed for the new or experienced accident investigator, this course will cover ten topic areas essential to good report writing. Participants will be given the techniques and tools to improve their writing skills.

ID CODE: ACD103

DATE: July 24 – 25, 2006 (Monday – Tuesday)

REGISTRATION DEADLINE: July 13. Online registration available - contact your administrative officer.

CEUs: 1.3**OVERVIEW:**

- Organization – clear, concise and logical narrative
- Documentation - appropriate level of detail
- Object references – descriptions of the relationship and location of relevant objects to other relevant objects
- Images, graphs, diagrams and tables – when to use which tool to most effectively support the narrative
- Factual writing – objective statements without analysis
- Analytical structure – supporting each analytical statement with content in the factual report
- Comprehensibility – keys to writing for a diverse audience
- Revisions – using peer review and other tools to improve the product
- Grammar refresher – avoiding the most common errors
- Consistency – using the NTSB Style Guide, templates, checklists and other tools to streamline the report writing process

PERFORMANCE RESULTS: Upon completion of this course the participant will be able to:

- Increase productivity - use the editing process to maximize effectiveness
- Create better reports - write and separate detailed factual statements from well-reasoned analysis
- Eliminate common errors - write more confidently with the NTSB Style Guide, checklists and grammar refresher reference materials
- Improve communication skills - employ the tools and techniques in all written materials and correspondence

WHO MAY ATTEND: NTSB employees who write technical reports.

Information for Participants



CONTINUING EDUCATION UNITS (CEUs)

The NTSB Academy is an active and current member of the International Association for Continuing Education and Training. Participants in Academy courses will receive one (1) CEU credit for every ten (10) contact hours of instruction. A contact hour is defined as 60 minutes spent in interaction between a learner and instruc-

tor or between a learner and materials that have been prepared to advance learning objectives. The number of CEUs awarded is indicated in each course description.

In order to receive the CEU credit and a training certificate the course attendee must:

- Participate in all learning activities, including discussions, class projects, case studies, role-playing and tests.
- Attend all scheduled classes. Partial credit will not be issued for those who do not attend the entire course.

The Academy will make reasonable efforts to provide written notification to those participants who do not successfully complete the course.

There are some classes in which credit is available from other organizations or institutions. This information is also listed in the CEUs section of the course description.

For further information about CEUs and a list of organizations that accept them, see the IACET website: www.iacet.org.

TRANSCRIPT REQUESTS

The Academy will maintain a transcript for every participant who completes a CEU accredited course. These records will be maintained for ten (10) years.

The Academy does not accept phone or e-mail requests for transcripts. Transcript requests must be signed by the individual students (or former student) and will only be issued after receipt of a written request submitted via fax or mail.

All transcript requests will be processed within ten (10) business days. Up to two transcripts will be processed free of charge, per student, per calendar year. An administrative fee of \$15 will be charged for each additional transcript.

To obtain a transcript or have one mailed to another organization, a Transcript Request form (available on our website) should be submitted:

<http://www.nts.gov/academy/courseinfo/transcript.pdf>

Alternatively, you may submit a letter with the following information:

- Full name(s) used for registration
- Home address
- Daytime phone
- E-mail address (if available)
- Month and day of birth (i.e. July 4 = 07/04)
- Name and address of the organization to which the transcript should be sent
- Signature

Submit the letter by fax or mail:

FAX: 571-223-3904

MAIL: NTSB Academy
Office of the Registrar
45065 Riverside Parkway
Ashburn, VA 20147-4287

ELIGIBILITY

Those applying to attend a course should meet the admission criteria as defined in the "Who May Attend" section of the course description. Those unsure about eligibility to attend a particular course should contact StudentServices@nts.gov. All inquiries are welcomed and will be replied to as expeditiously as possible.

TUITION

As is common practice among many other federal programs offering training to federal and non-federal individuals and entities, tuition serves to offset all or a portion of the cost of the training course. Tuition varies by course and is based on course development and delivery costs.

Other than the tuition discount for early registration, the Academy does not offer any special reduced rates for groups, members of the military, or for employees of federal or state or local government agencies.

APPLICATIONS AND PAYMENTS

Please read the course description carefully since it contains registration and tuition payment information and deadlines.

Applications via online registration system

The following forms of payment are accepted via online registration: American Express, MasterCard, VISA, Diners Club, Discover, debit card and e-check.

Applications submitted via fax or mail

The Academy does not have the facilities to process cash transactions. Acceptable forms of payment are: American Express, MasterCard, VISA, Diners Club, Discover, check, money order and IPAC (for U.S. federal employees only).

Those who have not received a registration confirmation notice within ten (10) business days of applying and paying online or via fax (15 business days if by mail) should contact StudentServices@ntsb.gov (571-223-3911).

To obtain the discounted tuition for early registration, the application with payment must be postmarked no later than the last day for early registration as indicated in the course description.

Those residing outside the United States wishing to remit funds by means other than those listed above should contact the Registrar at StudentServices@ntsb.gov.

SUBSTITUTIONS, CANCELLATIONS AND REFUNDS

Substitutions are permitted on a case-by-case basis. To initiate a substitution request, the registered participant must submit a [Participant Substitution Request](#) form available at ntsb.gov/academy.

To be eligible for a refund, the [Cancellation/Refund Request](#) form (available at ntsb.gov/academy) must be submitted no later than seven (7) business days prior to the first day of the course.

UNSCHEDULED CLASS CANCELLATIONS

The NTSB Academy is open from 8:00 AM to 5:00 PM, Monday - Friday, except for holidays observed by the Federal Government. Exceptions to the Academy's normal operating schedule may be made in the case of extreme weather or civil emergency. In addition, since many of the Academy's instructors are active transportation accident responders, there is the possibility that a course may be cancelled in the event of a major transportation disaster.

To check on the OPERATING STATUS of the Academy, or of any course, please call 866-406-7306 for current information available 24 hours a day.

This phone number is also listed on the OPERATING STATUS page on our website: ntsb.gov/academy/status.htm.

In the event that a course is cancelled because of extreme weather, civil emergency or a major transportation disaster, the NTSB will, at its discretion:

- Issue a pro-rated tuition refund, or
- Allow the student to attend the missed days during the next scheduled course

The NTSB will not, however, be liable for any loss that the student incurs due to the cancellation. This includes, but is not limited to, all expenses for lodging and transportation.

Before purchasing a non-refundable airfare, it is recommended that the student be advised by a travel professional or airline representative of the change/cancellation penalties associated with such restricted tickets.

SPECIAL NEEDS

Persons with disabilities or special needs are encouraged to contact the Academy in advance at StudentServices@ntsb.gov or 571-223-3911 so reasonable accommodations may be made.

CERTIFICATE OF TRAINING

Each participant completing an Academy course will receive a Certificate of Training signed by the Academy Director and the NTSB Chairman.

CLASS HOURS

Registration opens at 8:15 am on the first day of the course. Class hours are 9:00 am to 5:00 pm, unless otherwise indicated. Travel arrangements should be made to allow for participation in all sections of the course.

FOOD SERVICE

Tuition typically includes a catered lunch on all full class days; beverages are provided in the morning and afternoon.

ATTIRE

Appropriate attire is business casual or your organizational uniform, and is entirely your preference. The temperature in the building may fluctuate, so participants are encouraged to dress in layers.

INTERNET ACCESS

Each seat in the classroom is equipped with a data port and power outlet so those with notebook computers may connect to the Internet. Those intending to access the Internet while at the Academy should bring an ethernet/network cable to connect. Wireless Internet access is not currently available.

ACCOMMODATIONS

Participants are responsible for their own accommodations. All courses are held at the NTSB Academy in Ashburn, Virginia. A list of hotels in proximity to the Academy is on the following page.

Hotel	Address / Phone	Website	Distance from Academy	Distance from Dulles Airport
Marriott Courtyard*	45500 Majestic Drive Dulles, VA 20166 571-434-6400	marriott.com	3 miles	6 miles
Extended Stay Suites*	46001 Waterview Plaza Sterling, VA 20166 703-444-7240	extendedstay.com	3 miles	8 miles
Hampton Inn-Cascades	46331 McClellan Way Sterling, VA 20165 703-450-9595	hamptoninndullescascades.com	3 miles	8 miles
Amerisuites**	21481 Ridgetop Circle Dulles, VA 20166 703-444-3909	amerisuites.com	3 miles	8 miles
			Free shuttle†	
Suburban Extended Stay - Sterling**	45510 E. Severn Way Sterling, VA 20166 703-674-2299	suburbanhotels.com	4 miles	6 miles
			Free shuttle†	
Candlewood Suites Washington Dulles - Sterling**	45520 E. Severn Way Sterling, VA 20166 703-674-2288	candlewoodsuites.com	4 miles	6 miles
			Free shuttle†	
Embassy Suites - Dulles North**	44610 Waxpool Road Ashburn, VA 20147 703-723-5300	dullesembassysuites.com	6 miles	5 miles
Homewood Suites by Hilton - Dulles North**	44620 Waxpool Road Ashburn, VA 20147 703-723-7500	dulleshomewoodsuites.com	6 miles	5 miles
Hampton Inn-Dulles	45440 Holiday Drive Dulles, VA 20166 703-471-8300	hamptondulles.com	6 miles	3 miles
Holiday Inn-Dulles*	1000 Sully Road Dulles, VA 20166 703-471-7411	hidullesairport.com	6 miles	3 miles

* Discount available. Ask for "George Washington University" rate.

** Discount available. Ask for "NTSB Academy" rate.

† Free shuttle between airport, hotel and NTSB Academy.



Driving directions to the Academy are available at www.ntsb.gov/academy (Campus)



NTSB ACADEMY

National Transportation Safety Board

APPLY AND PAY ONLINE (credit card, debit card or e-check) at ntsb.gov/academy or complete this form and submit by mail or fax.

COURSE APPLICATION

First name M.I. Last Name

Title/Function Organization

Mailing Address ☐ Home ☐ Office

E-Mail (All Academy communications are sent via e-mail)

Daytime Phone Fax

For identification purposes, please provide the month and the day of your birth (i.e., July 4 = 07/04): __ / __

I am a returning student: ☐ Yes ☐ No

Course ID Code(s) Date(s) Tuition \$

\$

Total \$

By signing below, I verify that I have read and understood the UNSCHEDULED CLASS CANCELLATION advisory (p. 41), the REFUND POLICY (p. 41) and the PRIVACY ACT STATEMENT on the opposite side of this page.

Participant Signature: Date

Method of Payment: Please check one method below. (NTSB cannot accept cash)

☐ IPAC (submit SF-182 or DD Form 1556 with application)

Federal Agency Location Code (ALC) and contact person: _____

☐ Check ☐ Money Order (Made payable to NTSB)
☐ MasterCard ☐ VISA ☐ AMEX ☐ DC ☐ Discover

Name as it appears on card

Card Number Expiration Date

Name as it should appear on training certificate:

Mail:	Registrar NTSB Academy 45065 Riverside Parkway Ashburn, VA 20147	Fax:	571-223-3904
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Submit application by mail or fax

Detach Here and Mail or Fax

PRIVACY ACT STATEMENT: This information is solicited under authority of the Privacy Act of 1974. Furnishing the information on this form is voluntary, but failure to do so may result in disapproval of your request to participate in a program at the NTSB Academy. The purpose of this information is to facilitate timely processing of your request, to ensure your eligibility, and to prevent misuse of any funds involved.

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